

MULTIPLEX FLOW IMMUNOASSAYS PREFERABLY WITH MAGNETIC PARTICLES AS SOLID PHASE

ABSTRACT OF THE DISCLOSURE

Heterogeneous assays for different analytes in a single biological sample
5 are performed simultaneously in a multiplexed assay that combines flow cytometry with
the use of magnetic particles as the solid phase and yields an individual result for each
analyte. The particles are distinguishable from each other by characteristics that permit
them to be differentiated into groups, each group carrying an assay reagent bonded to the
particle surface that is distinct from the assay reagents of particles in other groups. The
10 magnetic particles facilitate separation of the solid and liquid phases, permitting the
assays to be performed by automated equipment. Assays are also disclosed for the
simultaneous detection of antibodies of different classes and a common antigen
specificity or of a common class and different antigen specificities. Each type is
accomplished by immunological binding at the surfaces of two distinct solid phases in a
15 sequential manner with dissociation of the binding and washing of the solid phase in
between the binding steps.